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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,865	12/07/2005	Stefan Haaks	2003P08356wous	7446

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Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

LAUGHLIN, NATHAN L

ART UNIT	PAPER NUMBER
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2123

MAIL DATE	DELIVERY MODE
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09/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,865	Applicant(s) HAAKS ET AL.	
	Examiner NATHAN LAUGHLIN	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32, 41, 42 and 44-48 is/are pending in the application.
- 4a) Of the above claim(s) 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41, 42 and 44-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the election filed on 5-08-08 and the request for continued examination filed on 1-08-08.

Examiner has fully considered the patentable distinctness and reiterates that the restriction is proper; therefore, the restriction is made final.

Claims 32, 41-42, and 44-48 are pending.

Claim 32 is withdrawn.

Claims 41-42, and 44-48 are presented for examination.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1-08-08 has been entered.

Claim Rejections - 35 USC § 103

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 41-42, 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popp (U.S. Pat. 7,130,709) in view of Simonetti (U.S. PG Pub. 2002/0176617) in further view of Card (U.S. Pat. 6,970,857).

As to claim 41, Popp teaches a method for determining causes of failures in industrial processes, comprising:

selecting a set of industrial process variables for analysis (col. 3 lines 61- col. 4 line 34);
measuring the selected variables at selected measuring points on a production line over time until a failure indication is detected in one of the variables (col. 3 lines 61- col. 4 line 34, col. 21 lines 41-63, col. 28 lines 1-30) (fig. 4a);

determining correlations between the failure indication and any deviations in the other measured variables (col. 49 line 63- col. 50 line 14);

excluding correlations that indicate a consequential effect, and not a cause of the failure indication, and determining the cause of the failure indication without a need for

detecting a second failure (col. 49 line 63- col. 50 line 14);

working-out corrective measures to eliminate the cause of the failure indication;

evaluating the corrective measures technically (col. 28 lines 1-30, col. 49 line 63- col. 50 line 14); and

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wherein the production line comprises an automation system and control bus that automate the production line, and wherein the measuring of at least some of the selected variables is performed directly from at least some of the measuring points on the production line without passing through the control bus (fig. 9 and 11).

As to claim 45, Popp teaches wherein the evaluation system continuously performs elimination routines to isolate variables directly related to the failure to determine the location on the production line of the failure (col. 28 lines 1-30, col. 49 line 63- col. 50 line 14).

As to claim 46, Popp teaches determining if a sub-process in the industrial process is the location of the failure to determine the cause of the failure (col. 28 lines 1-30, col. 49 line 63- col. 50 line 14).

As to claim 47, Popp teaches determining if the cause of the failure is located in the sub process, and evaluating the sub process to determine a root cause of the failure (col. 28 lines 1-30, col. 49 line 63- col. 50 line 14).

As to claim 48, Popp teaches further comprising correlation data to a service provider that provides service in the event of a failure in the industrial process to correct the failure (col. 28 lines 1-30, col. 49 line 63- col. 50 line 14).

Popp teaches some of the claimed invention including the limitations of claims 41, and 45-48. Popp teaches that failures are prioritized by logical importance in terms of their respective relationships to a most likely root source. That is, if the failure is detected at multiple places prioritizing the first place the failure was detected. Popp differs from the invention as recited in claim 41 and 42 in that the combined disclosure or teaching fails to disclose or teach the following:

As to claim 41, time correlating the failure.

As to claim 42, wherein the production line produces a continuously moving web of material, and further comprising determining a relative time offset for each of the selected measuring points based on a speed of the web passing through the production line, and applying the time offsets to the selected variables to correlate deviations in the variables that are offset in time to locate a position of a failure on the production line.

As to claims 41 and 42, Simonetti teaches that failures can be time corrected and using the speed of the web can be stamped and it can be determined the exact time when a failure location will pass by a certain piece of equipment [0032, 0048].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was created to include teachings of Simonetti into the teachings of Popp. The motivation to combine is Simonetti teaches using a time stamp along with a

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camera inspection system a precise location of a defect can be known for post processing device, such as monitoring or correction [0032, 0046, 0048].

Popp in view of Simonetti teach most of the claimed invention including the limitations of claims 41, 42, 45-48. Popp teaches that failures are prioritized by logical importance in terms of their respective relationships to a most likely root source. That is, if the failure is detected at multiple places prioritizing the first place the failure was detected. Popp differing from the invention as recited in claim 41 in that the combined disclosure or teaching fails to disclose or teach the following:

As to claim 41, evaluating the corrective measures and selecting and implementing an optimum one of the corrective measures on the production line;

However, Card teaches the following:

As to claim 41, Card teaches using an economical analysis of a corrective action; and selecting and implementing an optimum one of the corrective measures (col. 5 lines 36-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was created to include the teachings of Card into the system and methods of Popp further modified by Simonetti, the motivation to combine is Card teaches using a

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optimizer when multiple corrective action are present and yield the corrective action with the lowest cost (col. 5 lines 36-46).

4. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Popp (U.S. Pat. 7,130,709) in view of Simonetti (U.S. PG Pub. 2002/0176617) in further view of Card (U.S. Pat. 6,970,857) and in further view of Buda (U.S. Pat. 6,611,724).

Popp in view of Simonetti further modified by Card teach most of the claimed invention including the limitations of claims 41, 42, 45-48. Popp, Simonetti, and Card differing from the invention as recited in claim 44 in that the combined disclosers or teachings fails to disclose or teach the following:

As to claim 44, wherein the measuring step comprises time-stamping samples of the selected variables using a time signal from a global positioning system receiver connected to the measuring and evaluation system.

However, Buda teaches the following:

As to claim 44 Buda teaches wherein the measuring step comprises time-stamping samples of the selected variables using a time signal from a global positioning system receiver connected to the measuring and evaluation system stamp (col. 9 line 61- col. 10 line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the time-stamping of Buda into the system as described by Popp in combination with Simonetti further modified by Card. The motivation to combine is Buda teaches that using a GPS for time stamping results in very accurate time stamp (col. 9 line 61- col. 10 line 7).

Response to Arguments

5. Applicant's arguments with respect to claim 41-42 and 44-48 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN LAUGHLIN whose telephone number is (571)270-1042. The examiner can normally be reached on M - F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nate Laughlin/
Examiner, Art Unit 2123

/Paul L Rodriguez/
Supervisory Patent Examiner,
Art Unit 2123